

Amendments to the Claims:

1. (Currently Amended) A system for ~~analysing~~ analyzing ECG curvature, ~~the system comprising:~~

input means; and

an ECG source,

~~wherein the system is configured to isolate and store at least one among a number of different parameters ~~is isolated and stored,~~~~

~~which system has wherein the input means is connected to [[an]] the ECG source,~~

~~where the wherein the system is configured to indicate and/or isolate different parameters of a received ECG curvature are indicated and/or isolated by the system for indicating to indicate symptoms,~~

~~[[where]] wherein the system is configured to combine, in at least a first mathematical analysis, a first number of selected parameters from at least three main groups, which groups comprise of parameters [[of]] including symmetry, flatness, duration and/or complexity, are combined in at least a first mathematical analysis,~~

~~where the wherein the system is configured to represent a result of the analysis is represented as a point in at least one coordinate system, comprising having at least one axis,~~

~~where the wherein the system compares the is configured to compare actual coordinates in the coordinate system with a number of reference parameters stored in the system, for indicating to indicate symptoms or diseases having influence on the ECG curvature,~~

~~[[where]] wherein the system analyses the is configured to analyze a QT curvature of the ECG for indicating to indicate hereditary or acquired Long QT Syndrome.~~

2. (Currently Amended) A system for ~~analysing~~ analyzing ECG curvature according to claim 1, ~~characterised in that wherein the system is analysing~~ configured to analyze the ECG curvature for Long QT Syndrome acquired by drug influence.

3. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d in that wherein the system is configured to repeat the analysis of the QT curvature analysing process is repeated in the system~~ for further selected parameters in order to achieve more reliable results.

4. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d in that wherein the group of symmetry comprises at least one of the following parameters:~~

- S1 Symmetry evaluated from Tstart to Tend[.];
- S2 Symmetry with Tpeak as mean evaluated from Tstart to Tend[.];
- S3 Symmetry with Tpeak as mean evaluated in a symmetric interval of 10% of the Tstart-Tend-interval surrounding Tpeak[.];
- S4 Symmetry with Tpeak as mean evaluated in a symmetric interval of 20% of the Tstart-Tend-interval surrounding Tpeak[.];
- S5 Ratio of the time interval “Tstart to Tpeak” and the time interval “Tpeak to Tend[.]”;
- S6 Ratio of the average slope from Tstart to Tpeak and from Tpeak to Tend[.];
- S7 Variation evaluated from Tstart to Tend, calculated by the formula[.];
- S8 Variation with Tpeak as mean evaluated from Tstart to Tend[.];
- S9 Variation with Tpeak as mean evaluated in a symmetric interval of 10% of the Tstart-Tend-interval surrounding Tpeak[.];
- S10 Variation with Tpeak as mean evaluated in a symmetric interval of 20% of the Tstart-Tend-interval surrounding Tpeak[.];
- S11 The Hill parameter, K_m , evaluated by least square fitting of the ~~repolarisation repolarization~~ integral, RI(t), from the Jpoint to the following Ponset[.]; and
- S12 The Hill parameter, K_m , evaluated by least square fitting of the ~~repolarisation repolarization~~ integral, RI(t), from Tstart to Tend.

5. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d in that wherein the group of flatness comprises at least one of the following parameters:~~

- F1 Flatness evaluated from Tstart to Tend[.];

- F2 Flatness parameter, F1, normalized by the size of the R wave[[.]];
F3 Flatness with Tpeak as mean evaluated from Tstart to Tend[[.]];
F4 Flatness parameter, F3, normalized by the size of the R wave[[.]];
F5 Flatness with Tpeak as mean evaluated in a symmetric interval of 10% of the Tstart-Tend-interval surrounding Tpeak[[.]];
F6 Flatness parameter, F5, normalized by the size of the R wave[[.]];
F7 Flatness with Tpeak as mean evaluated in a symmetric interval of 20% of the Tstart-Tend-interval surrounding Tpeak[[.]];
F8 Flatness parameter, F7, normalized by the size of the R wave[[.]];
F9 Ratio of the total area under the T-wave from Tstart to Tpeak and the corresponding time interval[[.]];
F10 Flatness parameter, F9, normalized by the size of the R wave.
F11 Ratio of the total area under the T-wave from Tpeak to Tend and the corresponding time interval.
F12 Flatness parameter, F11, normalized by the size of the R wave[[.]];
F13 Ratio of the total area under the T-wave from Tstart to Tend and the corresponding time interval[[.]];
F14 Flatness parameter, F13, normalized by the size of the R wave[[.]];
F15 Ratio of the T wave height and the T wave width[[.]];
F16 The T wave height[[.]];
F17 Average slope from Tstart to Tpeak[[.]];
F18 Average slope from Tpeak to Tend[[.]];
F19 The Hill parameter, n, evaluated by least square fitting of the ~~repolarisation repolarization~~ integral, RI(t), from the Jpoint to the following Ponset[[.]];
F20 The Hill parameter, n, evaluated by least square fitting of the ~~repolarisation repolarization~~ integral, RI(t), from Tstart to Tend[[.]];
F21 The Hill parameter, V_{max}, evaluated by least square fitting of the ~~repolarisation repolarization~~ integral, RI(t), from the Jpoint to the following Ponset[[.]]; and
F22 The Hill parameter, V_{max}, evaluated by least square fitting of the ~~repolarisation repolarization~~ integral, RI(t), from Tstart to Tend.

6. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d i n t h a t~~
wherein the group of duration comprises at least one of the following parameters:

QTc The Q-T interval normalized by the square root of the R-R interval according to Bazett's formula[[.]];

D2 The time interval from Tstart to Tend[[.]];

D3 The time interval from Tstart to Tpeak[[.]]; and

D4 The time interval from Tpeak to Tend.

7. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d i n t h a t~~
wherein the group of complexity comprises at least one of the following parameters:[[,]]

C1: Number of local maxima between Tstart and Tend; the minimum number is one[[.]]; and

C2: Number of phases between Tstart and Tend, where a phase is defined as a singly connected part of the wave that is entirely above or entirely below the iso-electric line; the minimum number is one.

8. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d i n t h a t~~
wherein the system is selecting and combining configured to select and combine parameters from the different groups.

9. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d i n t h a t~~
wherein the system is configured to be trained during use, [[where]] wherein the parameters' values are calculated for individual subjects, [[where]] wherein the mathematical analysis of the parameters chooses determines at least one optimal small parameter set out of the complete number of parameters from all categories.

10. (Currently Amended) System according to claim 1, ~~e h a r a c t e r i s e d i n t h a t~~
wherein the final classification function is at least based on data from at least one LQT or drug influenced group and Normal subjects stored as a training set, with the consequences

that the classification ~~method~~ is improved by adding new subjects to the training set, [[which]] wherein the new subject can be ~~are~~ tailored to demographic or gender differences.

11. (Currently Amended) Method for ~~analysing~~ analyzing drug influence on ECG curvature, ~~which curvature contains having~~ a number of parameters, ~~characterised in~~ that the method ~~for analysing the ECG curvature incorporates the steps of comprising:~~

- [[a]] receiving ECG curvature from a source,
- [[b]] indicating a number of different parameters contained in the received ECG curvature,
- [[c]] storing the parameters in storage means,
- [[d]] selecting disease specific parameters in the storage means,
- [[e]] selecting parameters from ~~at least three groups, which groups comprises of~~ parameters [[of]] including symmetry, flatness, duration and/or complexity,[[.]]
- [[f]] combining selected parameters in mathematical ~~analysing~~ analyzing means,
- [[g]] representing the result of the mathematical analysis as a point in at least one coordinate system, ~~which coordinate system comprises having~~ at least one axis,
- [[h]] comparing the actual placement in the coordinate system with a number of reference parameters stored in a memory, and
- [[i]] analysing ~~analyzing~~ the QT curvature of the ECG for indicating drug induced changes.

12. (Currently Amended) Method according to claim 11, ~~characterised in~~ that the method [[is]] further comprising repeating the ~~analysing~~ analyzing process for further selected parameters for achieving more reliable results.

13. (Currently Amended) Use of a system for ~~analysing~~ analyzing ECG curvature for test of drugs, [[which]]

wherein system has input means connected to an ECG source,
wherein at least one among a number of different parameters is isolated and stored in the system,

[[where]] wherein the different parameters of a received ECG curvature are indicated and/or isolated for indicating possible symptoms,

[[where]] wherein a number of selected parameters, are combined in at least a first mathematical analysis, where the result of the analysis is represented as a point in at least one coordinate system, comprising at least one axis,

[[where]] wherein the system compares the actual placement in the coordinate system with a number of reference parameters stored in the system, for indicating symptoms having influence on the ECG curvature,

[[where]] wherein the parameters of the ECG curvature are calculated before and after a drug test for a number of subjects,

where the difference for selected parameters between before and after testing are calculated for each subject,

[[where]] wherein the system analyzes analyzes the QT curvature of the ECG for indicating acquired Long QT syndrome, and

[[where]] wherein a statistical analysis of selected parameters for a number of subjects gives statistical significance for at least one of the following decisions:

“aeeept acceptance of the drug”,

“rejection of the drug”, and

“further testing of the drug”.